

=> file biosis; d que 15
FILE 'BIOSIS' ENTERED AT 16:53:27 ON 04 MAR 2002
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FILE COVERS 1969 TO DATE.
CAS REGISTRY NUMBERS AND CHEMICAL NAMES (CNs) PRESENT
FROM JANUARY 1969 TO DATE.

RECORDS LAST ADDED: 21 February 2002 (20020221/ED)

L1 (6472)SEA FILE=BIOSIS ABB=ON PRINT? OR INKJET? OR INK (W) JET? OR
MICRODOT? OR MICRO (W) DOT?
L2 (359320)SEA FILE=BIOSIS ABB=ON ELECTROD? OR CIRCUIT? OR SENSOR? OR
MICROELECTROD? OR MICRO (W) ELECTROD? OR MICROSENSOR? OR MICRO
(W) SENSOR OR MICROCIRCUIT? OR MICRO (W) CIRCUIT?
L3 (2165)SEA FILE=BIOSIS ABB=ON THIN (2A) FILM?
L4 (7)SEA FILE=BIOSIS ABB=ON L1 AND L2 AND L3
L5 0 SEA FILE=BIOSIS ABB=ON L4 NOT (SCREEN PRINT### OR MICROCONTACT
PRINT### OR PRINTED CIRCUIT BOARD# OR THICK FILM#)

=>
=> file jicst
FILE 'JICST-EPLUS' ENTERED AT 16:53:36 ON 04 MAR 2002
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FILE COVERS 1985 TO 25 FEB 2002 (20020225/ED)

THE JICST-EPLUS FILE HAS BEEN RELOADED TO REFLECT THE 1999 CONTROLLED
TERM (/CT) THESAURUS RELOAD.

=> d que 113; d que 120; d que 127; d que 133; d que 141
L6 (1046)SEA FILE=JICST-EPLUS ABB=ON PLU=ON INK JET OR INKJET
L7 (50848)SEA FILE=JICST-EPLUS ABB=ON PLU=ON ELECTRODE OR MICROELECTROD
E OR MICRO ELECTRODE
L8 (55998)SEA FILE=JICST-EPLUS ABB=ON PLU=ON SENSOR OR MICROSENSOR OR
MICRO SENSOR
L9 (134782)SEA FILE=JICST-EPLUS ABB=ON PLU=ON CIRCUIT OR MICROCIRCUIT
OR MICRO CIRCUIT
L10 (68020)SEA FILE=JICST-EPLUS ABB=ON PLU=ON THIN FILM
L11 (94)SEA FILE=JICST-EPLUS ABB=ON PLU=ON L6 AND (L7 OR L8 OR L9)
L12 (54)SEA FILE=JICST-EPLUS ABB=ON PLU=ON GOLD (W) L10
L13 0 SEA FILE=JICST-EPLUS ABB=ON PLU=ON L11 AND L12

L14 (1046)SEA FILE=JICST-EPLUS ABB=ON PLU=ON INK JET OR INKJET
L15 (50848)SEA FILE=JICST-EPLUS ABB=ON PLU=ON ELECTRODE OR MICROELECTROD
E OR MICRO ELECTRODE
L16 (55998)SEA FILE=JICST-EPLUS ABB=ON PLU=ON SENSOR OR MICROSENSOR OR
MICRO SENSOR
L17 (134782)SEA FILE=JICST-EPLUS ABB=ON PLU=ON CIRCUIT OR MICROCIRCUIT
OR MICRO CIRCUIT
L18 (14)SEA FILE=JICST-EPLUS ABB=ON PLU=ON MICRODOT OR MICRO DOT
L19 (94)SEA FILE=JICST-EPLUS ABB=ON PLU=ON L14 AND (L15 OR L16 OR
L17)
L20 0 SEA FILE=JICST-EPLUS ABB=ON PLU=ON L19 AND L18

L21 (50848)SEA FILE=JICST-EPLUS ABB=ON PLU=ON ELECTRODE OR MICROELECTROD
E OR MICRO ELECTRODE
L22 (55998)SEA FILE=JICST-EPLUS ABB=ON PLU=ON SENSOR OR MICROSENSOR OR
MICRO SENSOR
L23 (134782)SEA FILE=JICST-EPLUS ABB=ON PLU=ON CIRCUIT OR MICROCIRCUIT
OR MICRO CIRCUIT
L24 (14)SEA FILE=JICST-EPLUS ABB=ON PLU=ON MICRODOT OR MICRO DOT
L25 (225355)SEA FILE=JICST-EPLUS ABB=ON PLU=ON (L21 OR L22 OR L23)
L26 (1)SEA FILE=JICST-EPLUS ABB=ON PLU=ON L25 AND L24
L27 0 SEA FILE=JICST-EPLUS ABB=ON PLU=ON L26 NOT (PEN LESS
PLOTTER)/TI

L28 (50848)SEA FILE=JICST-EPLUS ABB=ON PLU=ON ELECTRODE OR MICROELECTROD
E OR MICRO ELECTRODE
L29 (55998)SEA FILE=JICST-EPLUS ABB=ON PLU=ON SENSOR OR MICROSENSOR OR
MICRO SENSOR
L30 (134782)SEA FILE=JICST-EPLUS ABB=ON PLU=ON CIRCUIT OR MICROCIRCUIT
OR MICRO CIRCUIT
L31 (2)SEA FILE=JICST-EPLUS ABB=ON PLU=ON SILICONE (S) SURFACE (S)
MODIFY?
L32 (225355)SEA FILE=JICST-EPLUS ABB=ON PLU=ON (L28 OR L29 OR L30)
L33 0 SEA FILE=JICST-EPLUS ABB=ON PLU=ON L32 AND L31

L34 (1046)SEA FILE=JICST-EPLUS ABB=ON PLU=ON INK JET OR INKJET
L35 (50848)SEA FILE=JICST-EPLUS ABB=ON PLU=ON ELECTRODE OR MICROELECTROD
E OR MICRO ELECTRODE
L36 (55998)SEA FILE=JICST-EPLUS ABB=ON PLU=ON SENSOR OR MICROSENSOR OR
MICRO SENSOR
L37 (134782)SEA FILE=JICST-EPLUS ABB=ON PLU=ON CIRCUIT OR MICROCIRCUIT
OR MICRO CIRCUIT
L38 (13340)SEA FILE=JICST-EPLUS ABB=ON PLU=ON THIOL
L39 (225355)SEA FILE=JICST-EPLUS ABB=ON PLU=ON (L35 OR L36 OR L37)
L40 (504)SEA FILE=JICST-EPLUS ABB=ON PLU=ON L39 AND L38
L41 0 SEA FILE=JICST-EPLUS ABB=ON PLU=ON L40 AND L34

=> s l13 or l20 or l27 or l33 or l41
L141 0 L13 OR L20 OR L27 OR L33 OR L41

=>

=> file caplus

FILE 'CAPLUS' ENTERED AT 16:53:50 ON 04 MAR 2002

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FILE COVERS 1907 - 4 Mar 2002 VOL 136 ISS 10
FILE LAST UPDATED: 3 Mar 2002 (20020303/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

CAS roles have been modified effective December 16, 2001. Please check your SDI profiles to see if they need to be revised. For information on CAS roles, enter HELP ROLES at an arrow prompt or use the CAS Roles thesaurus (/RL field) in this file.

The P indicator for Preparations was not generated for all of the CAS Registry Numbers that were added to the CAS files between 12/27/01 and 1/23/02. As of 1/23/02, the situation has been resolved. Searches and/or SDIs in the H/Z/CA/CAPLUS files incorporating CAS Registry Numbers with the P indicator executed between 12/27/01 and 1/23/02 may be incomplete. See the NEWS message on this topic for more information.

=> d que L44; d que L47; d que L50; d que L54; d que L59

L42 (3871)SEA FILE=CAPLUS ABB=ON PLU=ON ("INK-JET PRINTING"/CT OR
"PRINTING (L) INK-JET"/CT OR "PRINTING, NONIMPACT (L) INK-JET"/
CT OR "PRINTING, NONIMPACT (L) INK-JET, RECEPTORS"/CT)
L43 (3879)SEA FILE=CAPLUS ABB=ON PLU=ON ("FILM ELECTRODES"/CT OR
"ELECTRODES (L) FILM"/CT OR "THIN-FILM ELECTRODES"/CT)
L44 0 SEA FILE=CAPLUS ABB=ON PLU=ON L42 AND L43

L45 (3871)SEA FILE=CAPLUS ABB=ON PLU=ON ("INK-JET PRINTING"/CT OR
"PRINTING (L) INK-JET"/CT OR "PRINTING, NONIMPACT (L) INK-JET"/
CT OR "PRINTING, NONIMPACT (L) INK-JET, RECEPTORS"/CT)
L46 (2766)SEA FILE=CAPLUS ABB=ON PLU=ON MICROELECTRODES+NT,OLD/CT
L47 1 SEA FILE=CAPLUS ABB=ON PLU=ON L45 AND L46

L48 (3871)SEA FILE=CAPLUS ABB=ON PLU=ON ("INK-JET PRINTING"/CT OR
"PRINTING (L) INK-JET"/CT OR "PRINTING, NONIMPACT (L) INK-JET"/
CT OR "PRINTING, NONIMPACT (L) INK-JET, RECEPTORS"/CT)
L49 (712)SEA FILE=CAPLUS ABB=ON PLU=ON MICROSENSORS+NT,OLD/CT
L50 1 SEA FILE=CAPLUS ABB=ON PLU=ON L48 AND L49

L51 (3871)SEA FILE=CAPLUS ABB=ON PLU=ON ("INK-JET PRINTING"/CT OR
"PRINTING (L) INK-JET"/CT OR "PRINTING, NONIMPACT (L) INK-JET"/
CT OR "PRINTING, NONIMPACT (L) INK-JET, RECEPTORS"/CT)
L52 (121416)SEA FILE=CAPLUS ABB=ON PLU=ON THIN (L) FILM/OBI
L53 (829825)SEA FILE=CAPLUS ABB=ON PLU=ON ?ELECTROD? OR ?CIRCUIT? OR
?SENSOR?
L54 11 SEA FILE=CAPLUS ABB=ON PLU=ON L51 AND L52 (L) L53

L55 (3871)SEA FILE=CAPLUS ABB=ON PLU=ON ("INK-JET PRINTING"/CT OR
"PRINTING (L) INK-JET"/CT OR "PRINTING, NONIMPACT (L) INK-JET"/
CT OR "PRINTING, NONIMPACT (L) INK-JET, RECEPTORS"/CT)

L56 (121416)SEA FILE=CAPLUS ABB=ON PLU=ON THIN (L) FILM/OBI
 L57 (829825)SEA FILE=CAPLUS ABB=ON PLU=ON ?ELECTROD? OR ?CIRCUIT? OR
 ?SENSOR?
 L58 (11)SEA FILE=CAPLUS ABB=ON PLU=ON L55 AND L56(L) L57
 L59 1 SEA FILE=CAPLUS ABB=ON PLU=ON L58 AND (MICRODOT OR MICRO DOT
 OR GOLD THIN FILM OR THIOL OR (SILICONE-BASED SURFACE MODIFYING
 AGENT))

=> s l44 or l47 or l50 or l54 or l59
 L142 11 L44 OR L47 OR L50 OR L54 OR L59

=>
 => file compendex
 FILE 'COMPENDEX' ENTERED AT 16:54:13 ON 04 MAR 2002
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FILE LAST UPDATED: 25 FEB 2002 <20020225/UP>
 FILE COVERS 1970 TO DATE.

=> d que L65; d que L74; d que L83; d que L92; d que L98; d que L104
 L60 (1093)SEA FILE=COMPENDEX ABB=ON PLU=ON INK JET OR INKJET
 L61 (89800)SEA FILE=COMPENDEX ABB=ON PLU=ON ELECTRODE OR MICROELECTRODE
 OR MICRO ELECTRODE
 L62 (104842)SEA FILE=COMPENDEX ABB=ON PLU=ON SENSOR OR MICROSENSOR OR
 MICRO SENSOR
 L63 (283991)SEA FILE=COMPENDEX ABB=ON PLU=ON CIRCUIT OR MICROCIRCUIT OR
 MICRO CIRCUIT
 L64 (2)SEA FILE=COMPENDEX ABB=ON PLU=ON L60 AND L61 AND L62 AND L63
 L65 1 SEA FILE=COMPENDEX ABB=ON PLU=ON L64 NOT (INK DROP SENSOR)/TI

L66 (1093)SEA FILE=COMPENDEX ABB=ON PLU=ON INK JET OR INKJET
 L67 (89800)SEA FILE=COMPENDEX ABB=ON PLU=ON ELECTRODE OR MICROELECTRODE
 OR MICRO ELECTRODE
 L68 (104842)SEA FILE=COMPENDEX ABB=ON PLU=ON SENSOR OR MICROSENSOR OR
 MICRO SENSOR
 L69 (283991)SEA FILE=COMPENDEX ABB=ON PLU=ON CIRCUIT OR MICROCIRCUIT OR
 MICRO CIRCUIT
 L70 (104742)SEA FILE=COMPENDEX ABB=ON PLU=ON THIN FILM
 L71 (458042)SEA FILE=COMPENDEX ABB=ON PLU=ON (L67 OR L68 OR L69)
 L72 (129)SEA FILE=COMPENDEX ABB=ON PLU=ON L71 AND L66
 L73 (3)SEA FILE=COMPENDEX ABB=ON PLU=ON L72 AND L70
 L74 1 SEA FILE=COMPENDEX ABB=ON PLU=ON L73 NOT (HOLE INTERCONNECTIO
 NS OR CONDUCTIVE RESISTIVE TRACES)/TI

L75 (1093)SEA FILE=COMPENDEX ABB=ON PLU=ON INK JET OR INKJET
 L76 (89800)SEA FILE=COMPENDEX ABB=ON PLU=ON ELECTRODE OR MICROELECTRODE
 OR MICRO ELECTRODE
 L77 (104842)SEA FILE=COMPENDEX ABB=ON PLU=ON SENSOR OR MICROSENSOR OR
 MICRO SENSOR
 L78 (283991)SEA FILE=COMPENDEX ABB=ON PLU=ON CIRCUIT OR MICROCIRCUIT OR
 MICRO CIRCUIT
 L79 (104742)SEA FILE=COMPENDEX ABB=ON PLU=ON THIN FILM

L80 (159)SEA FILE=COMPENDEX ABB=ON PLU=ON GOLD (W) L79
 L81 (458042)SEA FILE=COMPENDEX ABB=ON PLU=ON (L76 OR L77 OR L78)
 L82 (129)SEA FILE=COMPENDEX ABB=ON PLU=ON L81 AND L75
 L83 0 SEA FILE=COMPENDEX ABB=ON PLU=ON L82 AND L80

 L84 (1093)SEA FILE=COMPENDEX ABB=ON PLU=ON INK JET OR INKJET
 L85 (89800)SEA FILE=COMPENDEX ABB=ON PLU=ON ELECTRODE OR MICROELECTRODE
 OR MICRO ELECTRODE
 L86 (104842)SEA FILE=COMPENDEX ABB=ON PLU=ON SENSOR OR MICROSENSOR OR
 MICRO SENSOR
 L87 (283991)SEA FILE=COMPENDEX ABB=ON PLU=ON CIRCUIT OR MICROCIRCUIT OR
 MICRO CIRCUIT
 L88 (44)SEA FILE=COMPENDEX ABB=ON PLU=ON MICRODOT OR MICRO DOT
 L89 (458042)SEA FILE=COMPENDEX ABB=ON PLU=ON (L85 OR L86 OR L87)
 L90 (129)SEA FILE=COMPENDEX ABB=ON PLU=ON L89 AND L84
 L91 (1)SEA FILE=COMPENDEX ABB=ON PLU=ON L90 AND L88
 L92 0 SEA FILE=COMPENDEX ABB=ON PLU=ON L91 NOT (FULL COLOR
 PRINTER)/TI

 L93 (89800)SEA FILE=COMPENDEX ABB=ON PLU=ON ELECTRODE OR MICROELECTRODE
 OR MICRO ELECTRODE
 L94 (104842)SEA FILE=COMPENDEX ABB=ON PLU=ON SENSOR OR MICROSENSOR OR
 MICRO SENSOR
 L95 (283991)SEA FILE=COMPENDEX ABB=ON PLU=ON CIRCUIT OR MICROCIRCUIT OR
 MICRO CIRCUIT
 L96 (21)SEA FILE=COMPENDEX ABB=ON PLU=ON SILICONE (S) SURFACE (S)
 MODIFY?
 L97 (458042)SEA FILE=COMPENDEX ABB=ON PLU=ON (L93 OR L94 OR L95)
 L98 0 SEA FILE=COMPENDEX ABB=ON PLU=ON L97 AND L96

 L99 (89800)SEA FILE=COMPENDEX ABB=ON PLU=ON ELECTRODE OR MICROELECTRODE
 OR MICRO ELECTRODE
 L100 (104842)SEA FILE=COMPENDEX ABB=ON PLU=ON SENSOR OR MICROSENSOR OR
 MICRO SENSOR
 L101 (283991)SEA FILE=COMPENDEX ABB=ON PLU=ON CIRCUIT OR MICROCIRCUIT OR
 MICRO CIRCUIT
 L102 (21)SEA FILE=COMPENDEX ABB=ON PLU=ON SILICONE (S) SURFACE (S)
 MODIFY?
 L103 (458042)SEA FILE=COMPENDEX ABB=ON PLU=ON (L99 OR L100 OR L101)
 L104 0 SEA FILE=COMPENDEX ABB=ON PLU=ON L103 AND L102

=> s l65 or l74 or l83 or l92 or l98 or l104
 L143 2 L65 OR L74 OR L83 OR L92 OR L98 OR L104

=>

=> file inspec

FILE 'INSPEC' ENTERED AT 16:55:10 ON 04 MAR 2002

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FILE LAST UPDATED: 25 FEB 2002 <20020225/UP>

FILE COVERS 1969 TO DATE.

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=> d que L110; d que L118; d que L126; d que L133; d que L140
L105 ( 1755) SEA FILE=INSPEC ABB=ON PLU=ON INK JET OR INKJET
L106 ( 91837) SEA FILE=INSPEC ABB=ON PLU=ON ELECTRODE OR MICROELECTRODE OR
      MICRO ELECTRODE
L107 ( 132704) SEA FILE=INSPEC ABB=ON PLU=ON SENSOR OR MICROSENSOR OR MICRO
      SENSOR
L108 ( 476100) SEA FILE=INSPEC ABB=ON PLU=ON CIRCUIT OR MICROCIRCUIT OR
      MICRO CIRCUIT
L109 ( 662) SEA FILE=INSPEC ABB=ON PLU=ON L106 AND L107 AND L108
L110  2 SEA FILE=INSPEC ABB=ON PLU=ON L109 AND L105

L111 ( 1755) SEA FILE=INSPEC ABB=ON PLU=ON INK JET OR INKJET
L112 ( 91837) SEA FILE=INSPEC ABB=ON PLU=ON ELECTRODE OR MICROELECTRODE OR
      MICRO ELECTRODE
L113 ( 132704) SEA FILE=INSPEC ABB=ON PLU=ON SENSOR OR MICROSENSOR OR MICRO
      SENSOR
L114 ( 476100) SEA FILE=INSPEC ABB=ON PLU=ON CIRCUIT OR MICROCIRCUIT OR
      MICRO CIRCUIT
L115 ( 205809) SEA FILE=INSPEC ABB=ON PLU=ON THIN FILM
L116 ( 230) SEA FILE=INSPEC ABB=ON PLU=ON GOLD (W) L115
L117 ( 238) SEA FILE=INSPEC ABB=ON PLU=ON L111 AND (L112 OR L113 OR
      L114)
L118  0 SEA FILE=INSPEC ABB=ON PLU=ON L117 AND L116

L119 ( 1755) SEA FILE=INSPEC ABB=ON PLU=ON INK JET OR INKJET
L120 ( 91837) SEA FILE=INSPEC ABB=ON PLU=ON ELECTRODE OR MICROELECTRODE OR
      MICRO ELECTRODE
L121 ( 132704) SEA FILE=INSPEC ABB=ON PLU=ON SENSOR OR MICROSENSOR OR MICRO
      SENSOR
L122 ( 476100) SEA FILE=INSPEC ABB=ON PLU=ON CIRCUIT OR MICROCIRCUIT OR
      MICRO CIRCUIT
L123 ( 76) SEA FILE=INSPEC ABB=ON PLU=ON MICRODOT OR MICRO DOT
L124 ( 238) SEA FILE=INSPEC ABB=ON PLU=ON L119 AND (L120 OR L121 OR
      L122)
L125 ( 1) SEA FILE=INSPEC ABB=ON PLU=ON L124 AND L123
L126  0 SEA FILE=INSPEC ABB=ON PLU=ON L125 NOT (PRINTED CIRCUITS)/TI

L127 ( 1755) SEA FILE=INSPEC ABB=ON PLU=ON INK JET OR INKJET
L128 ( 91837) SEA FILE=INSPEC ABB=ON PLU=ON ELECTRODE OR MICROELECTRODE OR
      MICRO ELECTRODE
L129 ( 132704) SEA FILE=INSPEC ABB=ON PLU=ON SENSOR OR MICROSENSOR OR MICRO
      SENSOR
L130 ( 476100) SEA FILE=INSPEC ABB=ON PLU=ON CIRCUIT OR MICROCIRCUIT OR
      MICRO CIRCUIT
L131 ( 3) SEA FILE=INSPEC ABB=ON PLU=ON SILICONE (S) SURFACE (S)
      MODIFY?
L132 ( 238) SEA FILE=INSPEC ABB=ON PLU=ON L127 AND (L128 OR L129 OR
      L130)
L133  0 SEA FILE=INSPEC ABB=ON PLU=ON L132 AND L131

L134 ( 1755) SEA FILE=INSPEC ABB=ON PLU=ON INK JET OR INKJET

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L135(91837)SEA FILE=INSPEC ABB=ON PLU=ON ELECTRODE OR MICROELECTRODE OR
MICRO ELECTRODE
L136(132704)SEA FILE=INSPEC ABB=ON PLU=ON SENSOR OR MICROSENSOR OR MICRO
SENSOR
L137(476100)SEA FILE=INSPEC ABB=ON PLU=ON CIRCUIT OR MICROCIRCUIT OR
MICRO CIRCUIT
L138(777)SEA FILE=INSPEC ABB=ON PLU=ON THIOL
L139(238)SEA FILE=INSPEC ABB=ON PLU=ON L134 AND (L135 OR L136 OR
L137)
L140 0 SEA FILE=INSPEC ABB=ON PLU=ON L139 AND L138

=> s l110 or l118 or l126 or l133 or l140
L144 2 L110 OR L118 OR L126 OR L133 OR L140

=>
=> dup rem 15 l141 l142 l143 l144
L5 HAS NO ANSWERS
L141 HAS NO ANSWERS
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PROCESSING COMPLETED FOR L5
PROCESSING COMPLETED FOR L141
PROCESSING COMPLETED FOR L142
PROCESSING COMPLETED FOR L143
PROCESSING COMPLETED FOR L144
L145 15 DUP REM L5 L141 L142 L143 L144 (0 DUPLICATES REMOVED)

=>
=> d ibib ab hit 1-15

L145 ANSWER 1 OF 15 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2002:103543 CAPLUS
DOCUMENT NUMBER: 136:143798
TITLE: Thin-film field-effect transistor with
organic-inorganic hybrid semiconductor requiring low
operating voltages
INVENTOR(S): Dimitrakopoulos, Christos Dimitrios; Kagan, Cherie
Renee; Mitzi, David Brian
PATENT ASSIGNEE(S): International Business Machines Corporation, USA
SOURCE: U.S., 17 pp., Cont.-in-part of U.S. Ser. No. 323,804.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 3
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6344662	B1	20020205	US 2000-703964	20001101
US 5981970	A	19991109	US 1997-827018	19970325

US 6210479	B1	20010403	US 1999-259128	19990226
US 6344660	B1	20020205	US 1999-323804	19990602
PRIORITY APPLN. INFO.:			US 1997-827018	A1 19970325
			US 1999-259128	A2 19990226
			US 1999-323804	A2 19990602

AB A thin film transistor (TFT) device structure based on an org.-inorg. hybrid semiconductor material, that exhibits a high field effect mobility, high current modulation at lower operating voltages than the current state of the art org.-inorg. hybrid TFT devices. The structure comprises a suitable substrate disposed with the following sequence of features: a set of conducting gate electrodes covered with a high dielec. const. insulator, a layer of the org.-inorg. hybrid semiconductor, sets of elec. conducting source and drain electrodes corresponding to each of the gate lines, and an optional passivation layer that can overcoat and protect the device structure. Use of high dielec. const. gate insulators exploits the gate voltage dependence of the org.-inorg. hybrid semiconductor to achieve high field effect mobility levels at very low operating voltages. Judicious combinations of the choice of this high dielec. const. gate insulator material and the means to integrate it into the org.-inorg. hybrid based TFT structure are taught that would enable easy fabrication on glass or plastic substrates and the use of such devices in flat panel display applications.

REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

IT Conducting polymers
Dielectric films
Electric contacts
Electrodeposition
Evaporation
Gate contacts
Glass substrates
Ink-jet printing
Lithography
Molecules
Passivation
Printing (impact)
Screen printing
Self-assembly
Shadow masks
Spraying
Sputtering
Thin film transistors
(thin-film field-effect transistor with org.-inorg.
hybrid semiconductor requiring low operating voltages)

L145 ANSWER 2 OF 15 CAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 2001:78685 CAPLUS

DOCUMENT NUMBER: 134:139316

TITLE: Preferred methods for producing electrical circuit elements used to control an electronic display

INVENTOR(S): Duthaler, Gregg; Amundson, Karl; Drzaic, Paul; Kazlas, Peter; Wang, Jianna

PATENT ASSIGNEE(S): E Ink Corporation, USA

SOURCE: PCT Int. Appl., 38 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001008242	A1	20010201	WO 2000-US40450	20000721

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: US 1999-144952 P 19990721

AB Systems and methods for producing thin film transistor structures useful in controlling electronic displays. Thin film transistors are fabricated using all-additive methods including printing techniques, soft lithog. and material deposition methods. The thin film transistors can be deposited with the gate on the bottom or on the top of the structure. The deposition methods include the possibility of isolating nearly completely the transistor structure from the electronic display devices, so as to minimize or eliminate deleterious interactions there between.

REFERENCE COUNT: 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

IT Electric circuits
Gate contacts
Optical imaging devices
Semiconductor device fabrication
Thin film transistors
(fabrication of elec. circuit elements used to control electronic display)

IT Coating process
Colloids
Composites
Dielectric films
Dielectric liquids
Electrically conductive pastes
Ink-jet printing
Lithography
Photolithography
Printing (impact)
Printing (nonimpact)
Reactive sputtering
Screen printing
Sputtering
Vapor deposition process
(in fabrication of elec. circuit elements used to control electronic display)

L145 ANSWER 3 OF 15 CAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 2001:592212 CAPLUS

DOCUMENT NUMBER: 135:173668

TITLE: Material and method for printing high conductivity electrical conductors and other components on thin film transistor arrays

INVENTOR(S): Kydd, Paul H.; Wagner, Sigurd; Gleskova, Helena

PATENT ASSIGNEE(S): Parelec, Inc., USA

SOURCE: U.S., 24 pp., Cont.-in-part of U.S. Ser. No. 367,783.
CODEN: USXXAM

DOCUMENT TYPE: Patent

LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 2
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6274412	B1	20010814	US 1999-468649	19991221
US 6153348	A	20001128	US 1999-369571	19990806
PRIORITY APPLN. INFO.:			US 1998-113047	P 19981221
			US 1999-369571	A2 19990806
			US 1999-367783	A2 19990820
			US 1998-95782	P 19980807

AB A process sequence is disclosed for fabricating arrays of Thin Film Transistors by printing metallic conductors for the gate and data lines and possibly the In Sn Oxide Pixel electrode as well. The process eliminates conventional step-and-repeat photolithog. patterning, and provides high cond. metalization for large arrays. These arrays may be used in displays, detectors and scanners.

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

IT Electric contacts
 Gravure printing
Ink-jet printing
 Milling (size reduction)
 Optical imaging devices
 Optical scanners
 Photolithography
Sensors
 Thin film transistors
 (material and method for printing high cond. elec. conductors and other components on **thin film** transistor arrays)

L145 ANSWER 4 OF 15 CAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 2001:760179 CAPLUS

DOCUMENT NUMBER: 135:325321

TITLE: Method for manufacture of patterned **thin film** such as metal wiring on **circuit** boards, color filters, black matrix according to ink-jet printing process and substrate therefor

INVENTOR(S): Fujimori, Natsuo; Ishida, Masaya

PATENT ASSIGNEE(S): Seiko Epson Corp., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2001288578	A2	20011019	JP 2000-99968	20000331
AB The title method includes the steps of: forming a pattern made of org. mols. on a substrate; and forming thin film pattern according to the org. mols. pattern using ink-jet printing method. The method provides the fine patter of the homogeneous film thickness.				
TI Method for manufacture of patterned thin film such as metal wiring on circuit boards, color filters, black matrix according to ink-jet printing process and substrate therefor				
IT Ink-jet printing Optical filters				

Printed circuit boards

(method for manuf. of patterned **thin film** such as metal wiring on **circuit** boards, color filters, black matrix according to ink-jet printing process and substrate therefor)

IT Films

(patterned; method for manuf. of patterned **thin film** such as metal wiring on **circuit** boards, color filters, black matrix according to ink-jet printing process and substrate therefor)

L145 ANSWER 5 OF 15 CAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 2002:22403 CAPLUS

DOCUMENT NUMBER: 136:77558

TITLE: Organic transistor fabricated by ink-jet printing

AUTHOR(S): Shimoda, Tatsuya; Kawase, Takeo

CORPORATE SOURCE: Technol. Platform Res. Cent., Seiko/Epson Corp., 281 Fujimi, Fujimi-machi, Suwa-gun, Nagano, 399-0293, Japan

SOURCE: Oyo Butsuri (2001), 70(12), 1452-1456

CODEN: OYBSA9; ISSN: 0369-8009

PUBLISHER: Oyo Butsuri Gakkai

DOCUMENT TYPE: Journal; General Review

LANGUAGE: Japanese

AB A review. Org. devices and ultralow-energy process for fabricating thin-film elec. devices are the focus of much attention of researchers involved in thin-film device technol. We attempted to develop an org. transistor based on a novel process called "Micro-liq. process (.mu.-LP)". Ink-jet printing, one of the most powerful tools used in .mu.-LPs, provided us the org. TFT with a channel length as small as 5 .mu.m. Mobility and ON/OFF ratio of the developed TFT were 0.02 cm²/Vs and 105, resp. The copolymer of fluorene-bithiophene (F8T2) was used as a semiconducting layer. Inverter circuits, some of which have the vertical holes (Via-hole) by using ink-jet dissoln. process, were developed and their perfect operation was confirmed.

ST review microliq **thin film** transistor fabrication;
fluorene biothiophene copolymer semiconductor TFT review; inverter **circuit** ink jet printed interconnection review

IT Ink-jet printing

Inverters

Thin film transistors

(manuf. of elec. interconnections in high-mobility org. TFT by ink-jet printing)

L145 ANSWER 6 OF 15 CAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 2001:588447 CAPLUS

DOCUMENT NUMBER: 135:296091

TITLE: High-resolution ink-jet printing of all-polymer transistor circuits

AUTHOR(S): Sirringhaus, H.; Kawase, T.; Friend, R. H.

CORPORATE SOURCE: USA

SOURCE: MRS Bull. (2001), 26(7), 539-543

CODEN: MRSBEA; ISSN: 0883-7694

PUBLISHER: Materials Research Society

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The authors have shown that soln. self-assembly and direct ink-jet printing techniques allow the controlled fabrication of high-mobility, short-channel (5 .mu.m) polymer transistors and complete transistor circuits, including via-hole interconnects. The device performance of printed polymer thin-film transistors with mobilities of up to 2 x 10⁻² cm²/V-s and on-off current-switching ratios of 105 is believed to be

adequate for practical applications in active-matrix-display addressing or logic circuits in identification tags consisting of a few hundred transistors. Ink-jet printing has several advantageous attributes, some of which are particularly relevant if one envisions continuous, reel-to-reel manufg. of cheap integrated circuits on flexible substrates. Ink-jet printing provides accurate registration over large areas because the ink-jet head can be aligned locally with respect to a previously deposited pattern. Is local registration capability, which can be automated, is particularly important for flexible substrates that inevitably distort between subsequent patterning steps. Application-specific or even end-user-specific circuits can be defined by simple ink-jet printing of a network of interconnections and via holes on a prefabricated array of transistor gates. Compared with other liq.-phase patterning techniques, such as simple dip-coating of a substrate contg. a surface free-energy pattern, ink-jet printing allows precise local control of deposited droplet vol. and drying time to form patterns with arbitrary shapes and thicknesses.

REFERENCE COUNT: 27 THERE ARE 27 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

IT **Ink-jet printing**

Liquid crystals, polymeric

Thin film transistors

(high-resoln. ink-jet printing of all-polymer transistor circuits)

L145 ANSWER 7 OF 15 CAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 2000:512014 CAPLUS

DOCUMENT NUMBER: 133:142679

TITLE: Thin-film transistor, liquid crystal display and their manufacture

INVENTOR(S): Kitawada, Kiyofumi

PATENT ASSIGNEE(S): Seiko Epson Corp., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 11 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	JP 2000208774	A2	20000728	JP 1999-9171	19990118
AB	The invention relates to the thin-film transistor fabrication for the liq. crystal display, wherein a polysilazane-contg. coating soln. is sprayed onto sidewalls of gate electrodes by an ink-jet printing method.				
ST	thin film transistor liq crystal display manuf; ink jet coating gate electrode sidewall polysilazane				
IT	Ink-jet printing				
	Liquid crystal displays				
	Thin film transistors				
	(prepn. of gate electrode sidewall of thin-film transistor for liq. crystal display by ink-jet coating)				
IT	Silazanes				
	RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)				
	(prepn. of gate electrode sidewall of thin-film transistor for liq. crystal display by ink-jet coating)				

L145 ANSWER 8 OF 15 CAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 2000:908113 CAPLUS

DOCUMENT NUMBER: 134:139795
TITLE: High-resolution ink-jet printing of all-polymer transistor circuits
AUTHOR(S): Sirringhaus, H.; Kawase, T.; Friend, R. H.; Shimoda, T.; Inbasekaran, M.; Wu, W.; Woo, E. P.
CORPORATE SOURCE: Cavendish Laboratory, University of Cambridge, Cambridge, CB3 0HE, UK
SOURCE: Science (Washington, D. C.) (2000), 290(5499), 2123-2126
CODEN: SCIEAS; ISSN: 0036-8075
PUBLISHER: American Association for the Advancement of Science
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Direct printing of functional electronic materials may provide a new route to low-cost fabrication of integrated circuits. However, to be useful it must allow continuous manufg. of all circuit components by successive soln. deposition and printing steps in the same environment. The authors demonstrate direct ink-jet printing of complete transistor circuits, including via-hole interconnections based on soln.-processed polymer conductors, insulators, and self-organizing semiconductors. The use of substrate surface energy patterning to direct the flow of H2O-based conducting polymer ink-jet droplets enables high-resoln. definition of practical channel lengths of 5 .mu.m. High mobilities of 0.02 cm2/V-s and on-off current switching ratios of 105 were achieved.
REFERENCE COUNT: 24 THERE ARE 24 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

IT Conducting polymers
Ink-jet printing
Integrated circuits
Semiconductor device fabrication
Thin film transistors
(high-resoln. ink-jet printing of all-polymer transistor circuits)

L145 ANSWER 9 OF 15 COMPENDEX COPYRIGHT 2002 EI

ACCESSION NUMBER: 2001(27):252 COMPENDEX
TITLE: All-polymer **thin film** transistors fabricated by high-resolution **ink-jet** printing.
AUTHOR: Kawase, T. (Cavendish Laboratory University of Cambridge Epsom Cambridge Laboratory, Cambridge, United Kingdom); Sirringhaus, H.; Friend, R.H.; Shimoda, T.
MEETING TITLE: 2000 IEEE International Electron Devices Meeting.
MEETING ORGANIZER: IEEE
MEETING LOCATION: San Francisco, CA, United States
SOURCE: Technical Digest - International Electron Devices Meeting 2000.p 623-626, (IEEE cat n 00CB37138)
CODEN: TDIMD5 ISSN: 0163-1918
PUBLICATION YEAR: 2000
MEETING NUMBER: 58091
DOCUMENT TYPE: Conference Article
TREATMENT CODE: Theoretical
LANGUAGE: English

AB All-polymer **thin film** transistors (TFTs) are fabricated by **ink-jet** printing for the first time. Source/drain **electrodes** are printed using a conducting polymer (PEDOT) solution on substrates with patterned wetting-and-dewetting regions. A channel length down to 5 mum has been achieved without short-circuits. The TFTs show a high mobility of 0.02 cm2/V*s and on/off

ratio of more than 105 . These characteristics are equal or better than reference devices with gold **electrodes**. The fabrication of printed inverters is also demonstrated, in which components such as gate **electrodes**, interconnections, via-holes or resistors, are patterned with the **ink-jet** technique. 19 Refs.

TI All-polymer **thin film** transistors fabricated by high-resolution **ink-jet** printing.

AB All-polymer **thin film** transistors (TFTs) are fabricated by **ink-jet** printing for the first time. Source/drain **electrodes** are printed using a conducting polymer (PEDOT) solution on substrates with patterned wetting-and-dewetting regions. A channel length down to 5 μm has been achieved without short-circuits. The TFTs show a high mobility of 0.02 $\text{cm}^2/\text{V}\cdot\text{s}$ and on/off ratio of more than 105 . These characteristics are equal or better than reference devices with gold **electrodes**. The fabrication of printed inverters is also demonstrated, in which components such as gate **electrodes**, interconnections, via-holes or resistors, are patterned with the **ink-jet** technique. 19 Refs.

CT *Thin film transistors; Semiconducting organic compounds; Semiconductor device manufacture; Carrier mobility; Gold; Ink
ST Gold **electrodes**

L145 ANSWER 10 OF 15 INSPEC COPYRIGHT 2002 IEE

ACCESSION NUMBER: 2000:6730124 INSPEC

DOCUMENT NUMBER: A2000-22-8780B-005; B2000-11-7230M-025

TITLE: Why CMOS-integrated transducers? A review.

AUTHOR: Witvrouw, A. (IMEC, Leuven, Belgium); Van Steenkiste, F.; Maes, D.; Haspeslagh, L.; Van Gerwen, P.; De Moor, P.; Sedky, S.; Van Hoof, C.; de Vries, A.C.; Verbist, A.; De Caussemaeker, A.; Parmentier, B.; Baert, K.
SOURCE: Microsystem Technologies (Aug. 2000) vol.6, no.5, p.192-9. 39 refs.

Published by: Springer-Verlag

CODEN: MCTCEF ISSN: 0946-7076

SICI: 0946-7076(200008)6:5L:192:CITR;1-H

DOCUMENT TYPE: Journal

TREATMENT CODE: Application; General Review; Practical

COUNTRY: Germany, Federal Republic of

LANGUAGE: English

AB In many applications up to millions of **sensors** or actuators have to be interconnected to each other and/or to the outside world, making the monolithic integration of circuitry mandatory. This monolithic integration is also pursued for mass-produced transducers because of economical reasons. CMOS-integrated transducers are thus found in imaging transducer arrays and mass-produced physical **sensors**. In addition, integrated biochemical **sensor** arrays can be CMOS-integrated. In this article first a general overview of the field is given and then selected work in the imaging and biochemical field is highlighted. Concerning imaging transducer arrays an overview is given of visible and IR imagers, displays and of **inkjet** printheads. Concerning the new field of biochemical **sensor** arrays, two examples are described: a blood-gas **sensor** and an array of interdigitated **electrodes**. Finally an overview of the possible technological approaches regarding integrated processing of transducers is presented.

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integrated biochemical **sensor** arrays can be CMOS-integrated. In this article first a general overview of the field is given and then selected work in the imaging and biochemical field is highlighted. Concerning imaging transducer arrays an overview is given of visible and IR imagers, displays and of **inkjet** printheads. Concerning the new field of biochemical **sensor** arrays, two examples are described: a blood-gas **sensor** and an array of interdigitated **electrodes**. Finally an overview of the possible technological approaches regarding integrated processing of transducers is presented.

CT ARRAYS; BIOMEDICAL **ELECTRODES**; BIOSENSORS; BLOOD; CMOS IMAGE **SENSORS**; CMOS INTEGRATED **CIRCUITS**; INFRARED IMAGING; **INK JET** PRINTERS; INTERDIGITAL TRANSDUCERS; **MICROSENSORS**; REVIEWS

ST CMOS-integrated transducers; review; **sensors**; actuators; monolithic integration; mass-produced transducers; imaging transducers arrays; **mass-produced physical sensors**; **integrated biochemical sensor arrays**; imaging transducer arrays; overview; visible imagers; IR imagers; displays; **inkjet print-heads**; **biochemical sensor arrays**; **blood-gas sensor**; **interdigitated electrodes**

L145 ANSWER 11 OF 15 CAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1999:728303 CAPLUS

DOCUMENT NUMBER: 131:344321

TITLE: Manufacture of electron-emitting device, electron source, and display panel

INVENTOR(S): Kobayashi, Toyoko

PATENT ASSIGNEE(S): Canon K. K., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 24 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 11317157	A2	19991116	JP 1998-121389	19980430
AB	The device is manufd. by applying droplets of a soln. for forming thin film elec. conductor on a porous layer area, between a pair of electrodes facing each other, of a substrate so that the thin film elec. conductor is formed. The thin film with uniform thickness can be formed by the process. The electron source, involving an electron-emitting device and a means of applying elec. voltage on the device, is manufd. by a process involving the above method for formation of electron-emitting device. The display panel involving the electron source and an electroluminescent film is manufd. by a process involving the above process.			
IT	Electric conductors Electron sources Ink-jet printing (formation of electron-emitting part on area between electrode on porous substrate by applying liq. droplet elec. conductor thin film precursor)			
IT	Silica gel, processes RL: PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses) (formation of electron-emitting part on area between electrode on porous substrate by applying liq. droplet elec. conductor thin film precursor)			
IT	141-43-5D, Monoethanolamine, complex with palladium 7440-05-3D,			

Palladium, complex with monoethanolamine

RL: PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)

(elec. conductor precursor; formation of electron-emitting part on area between **electrode** on porous substrate by applying liq. droplet elec. conductor **thin film** precursor)

IT 681-84-5DP, Tetramethoxysilane, reaction product with sucrose isopropylcarbmate

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(formation of electron-emitting part on area between **electrode** on porous substrate by applying liq. droplet elec. conductor **thin film** precursor)

IT 249739-19-3DP, reaction product with tetramethoxysilane

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(porous layer; formation of electron-emitting part on area between **electrode** on porous substrate by applying liq. droplet elec. conductor **thin film** precursor)

IT 7631-86-9, Silica, uses

RL: TEM (Technical or engineered material use); USES (Uses)

(porous; formation of electron-emitting part on area between **electrode** on porous substrate by applying liq. droplet elec. conductor **thin film** precursor)

IT 1314-08-5, Palladium oxide

RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)

(**thin film**; formation of electron-emitting part on area between **electrode** on porous substrate by applying liq. droplet elec. conductor **thin film** precursor)

L145 ANSWER 12 OF 15 CAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1999:249048 CAPLUS

DOCUMENT NUMBER: 130:264419

TITLE: Ink-jet printing in manufacture of microsensor devices

INVENTOR(S): Fukushima, Hitoshi; Shimoda, Tatsuya; Morgan, Hywel

PATENT ASSIGNEE(S): Seiko Epson Corporation, Japan; The University Court of the University of Glasgow

SOURCE: Eur. Pat. Appl., 16 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 908725	A1	19990414	EP 1998-307968	19980930
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
CA 2248517	AA	19990330	CA 1998-2248517	19980930
US 2001044177	A1	20011122	US 2001-870588	20010601
PRIORITY APPLN. INFO.:			JP 1997-266225	A 19970930
			US 1998-163199	A3 19980930

AB An object of this invention is to provide a method of forming mol. recognizing films on sensor electrodes efficiently, within a short period of time, uniformly, and in a high quality state. Another object of this invention is to provide a method of accurately and efficiently introducing a vast no. of biol. samples for evaluation to the plural minute sensor electrode dots within a short period of time. In order to form org. thin

films on electrodes, a soln. of a material for the org. thin film is accurately printed via an ink-jet onto the surface of microelectrodes as required, thereby producing a high d. array of microelectrodes. Further, a soln. of a sample substance or a liq. substance to be sensed is ejected into air via an ink-jet nozzle to fall to the surface of org. thin membranes on the microelectrodes so that the sample is evaluated.

REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

IT **Thiols** (organic), uses
 RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)
 (in prepn. of **electrodes** with **thin films** of gold; ink-jet printing in manuf. of **microsensor** devices)

IT **Biochemical molecules**
Ink-jet printing
Microelectrodes
Microsensors
 (ink-jet printing in manuf. of microsensor devices)

IT **Films**
 (org. **thin**; ink-jet printing in manuf. of **microsensor** devices)

IT **Transistors**
 (polysilicone **thin film**; ink-jet printing in manuf. of **microsensor** devices)

IT 7440-57-5, Gold, uses
 RL: DEV (Device component use); USES (Uses)
 (**electrodes** with **thin films** of; ink-jet printing in manuf. of **microsensor** devices)

L145 ANSWER 13 OF 15 CAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1997:435636 CAPLUS

DOCUMENT NUMBER: 127:73087

TITLE: Manufacture of electron emitting element for electron source, display panel and image forming apparatus

INVENTOR(S): Kobayashi, Tatsu

PATENT ASSIGNEE(S): Canon K. K., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 16 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	JP 09115433	A2	19970502	JP 1995-296017	19951020
AB	Manuf. of the electron emitting element includes ink-jetting a soln. contg. a material for forming the nuclei of non-electrolytic deposition between electrodes on a substrate and then immersing the substrate into a soln. contg. the metal salt of the nuclei for forming the electron emitting region. Manuf. of the electron source, display panel and image forming app.				
IT	Ink-jet printing (used in manuf. of electron emitting element, electron source, display panel and image forming app.)				
IT	7772-99-8, Tin chloride, processes RL: PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses) (ink-jetted between electrode for forming nuclei of elec. conductive thin film for manuf. of electron				

emitting element, electron source, display panel and image forming app.)

L145 ANSWER 14 OF 15 COMPENDEX COPYRIGHT 2002 EI
 ACCESSION NUMBER: 1996(23):1863 COMPENDEX
 TITLE: Silicon-on-insulator integrated optical biosensors for environmental monitoring.
 AUTHOR: Newman, Jeffrey D. (Cranfield Univ, Cranfield, UK); Turner, Anthony P.F; Rickman, Andrew G.; Harpin, Arnold P.R.; Shaw, Matthew P.; McKenzie, James S.
 MEETING TITLE: IEE Colloquium on Optical Techniques for Environmental Monitoring.
 MEETING LOCATION: London, UK
 MEETING DATE: 15 Nov 1995
 SOURCE: IEE Colloquium (Digest) n 182 1995.IEE, Stevenage, Engl.p 3/1-3/6
 CODEN: DCILDN ISSN: 0963-3308
 PUBLICATION YEAR: 1995
 MEETING NUMBER: 44545
 DOCUMENT TYPE: Conference Article
 TREATMENT CODE: General Review
 LANGUAGE: English

AB The integrated optical technologies employed for evanescent field optical chemical/biological **sensors** were defined by the requirement for low optical confinement waveguides. These waveguides provide the basis for selective evanescent sensing elements, but are incompatible with the practical demands of high accuracy integrated optical measurement **circuits**. A viable integrated optics **sensor** technology must combine both sensing optical waveguides and active waveguide **circuits**. Bookham Technology developed a manufacturing process known as Active Silicon Integrated Optical **Circuits** (ASOCTM) to meet these need. ASOCTM brings to chip manufacture a highly efficient production method and allows all key components to be integrated on a single chip. 10 Refs.

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CT *Biosensors; Silicon on insulator technology; Environmental protection; Monitoring; Optical waveguides; Integrated optics; **Microelectrodes**; Optical **sensors**

ST Environmental monitoring; **Ink jets**

L145 ANSWER 15 OF 15 INSPEC COPYRIGHT 2002 IEE
 ACCESSION NUMBER: 1990:3567556 INSPEC
 DOCUMENT NUMBER: B90018494; C90014032
 TITLE: The ink drop **sensor**-a means of making **ink-jet** printers more reliable.
 AUTHOR: Goepel, E. (Siemens AG, Munich, West Germany)
 SOURCE: Proceedings. VLSI and Computer Peripherals. VLSI and Microelectronic Applications in Intelligent Peripherals and their Interconnection Networks (Cat.

No.89CH2704-5)
Washington, DC, USA: IEEE Comput. Soc. Press, 1989.
p.2/56-60 of xiv+791 pp. 3 refs.
Conference: Hamburg, West Germany, 8-12 May 1989
Sponsor(s): IEEE; Gesellschaft fur Inf.; Verband
Deutscher Elektrotech
Price: CCCC CH2704-5/89/0000-2056\$01.00
ISBN: 0-8186-1940-6

DOCUMENT TYPE: Conference Article
TREATMENT CODE: Practical; Experimental
COUNTRY: United States
LANGUAGE: English

AB An ink-drop **sensor** has been developed for use in **ink-jet** printers so that the function of the multinozzle printhead can be checked before printing starts or cyclically during printing. If the **sensor** detects that one or more nozzles have failed, the printhead can be restored to correct operation in a service station. This process, which is completely automatic and requires no intervention on the part of the user, increases the reliability of the **ink-jet** printer. The **sensor** principle utilizes the electrical conductivity of the ink. When ink droplets from any nozzle in the printhead are ejected onto comblike **electrodes**, conductive links are established between the prongs of these **electrode** combs, and changes in resistance can be measured at the **sensor** terminals. These changes in resistance are then converted in a signal-conditioning **circuit** into digital voltage signals. The author also discusses modified versions of the **sensor** suitable for special applications such as measuring the flight time of ink droplets and determining print position errors.

TI The ink drop **sensor**-a means of making **ink-jet** printers more reliable.

AB An ink-drop **sensor** has been developed for use in **ink-jet** printers so that the function of the multinozzle printhead can be checked before printing starts or cyclically during printing. If the **sensor** detects that one or more nozzles have failed, the printhead can be restored to correct operation in a service station. This process, which is completely automatic and requires no intervention on the part of the user, increases the reliability of the **ink-jet** printer. The **sensor** principle utilizes the electrical conductivity of the ink. When ink droplets from any nozzle in the printhead are ejected onto comblike **electrodes**, conductive links are established between the prongs of these **electrode** combs, and changes in resistance can be measured at the **sensor** terminals. These changes in resistance are then converted in a signal-conditioning **circuit** into digital voltage signals. The author also discusses modified versions of the **sensor** suitable for special applications such as measuring the flight time of ink droplets and determining print position errors.

CT AUTOMATIC TESTING; ELECTRIC SENSING DEVICES; **INK JET** PRINTERS

ST **ink drop sensor; ink-jet printers; multinozzle printhead; electrical conductivity; ink droplets; nozzle; comblike electrodes; conductive links; electrode combs; signal-conditioning circuit; digital voltage signals; flight time; print position errors**